

Commercial Real Estate Energy Alliance



Lighting and Controls Supplier Summit
Las Vegas, Nevada
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Chris Magee

Director of Sustainable Facilities Development
MGM MIRAGE

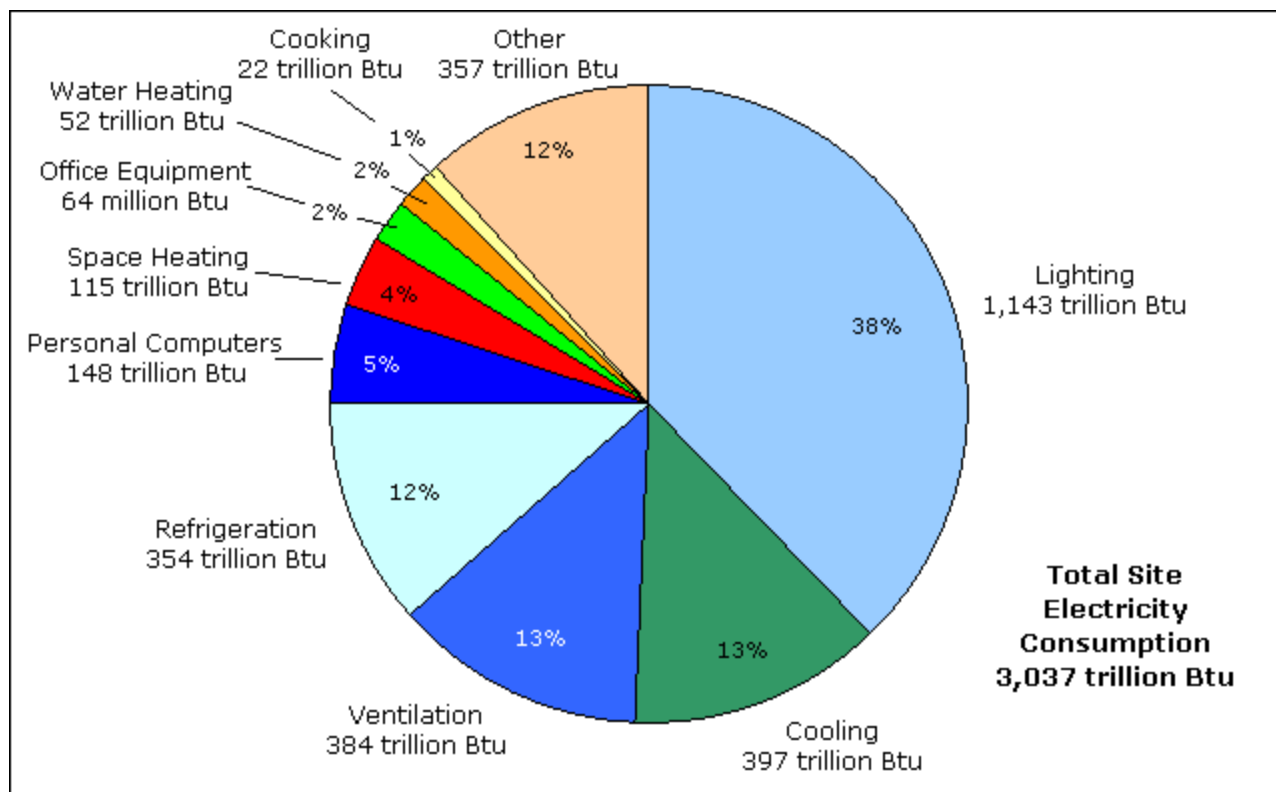
The Commercial Real Estate Energy Alliance (CREEA) subcommittees encompass six areas in commercial real estate buildings and operations that require best practices toolkits and research into innovative, cost-effective technologies.

Each subcommittee is made up of members who can identify and take advantage of design, retrofit, and operations and maintenance (O&M) energy-efficiency opportunities. Working groups established under each subcommittee are tasked with specific projects to meet the subcommittee's goals.

All subcommittee work is done in collaboration with DOE, national laboratories, and suppliers.

Impacts of Lighting in Commercial Buildings

More site electricity is consumed for lighting than for any other end use



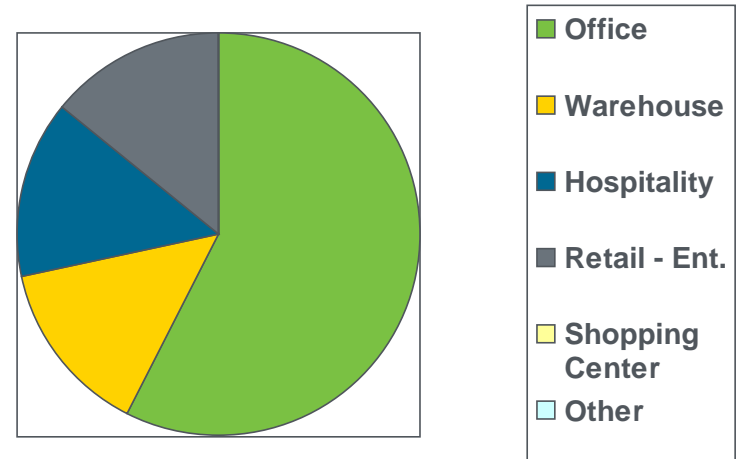
U.S. Energy Information Administration
Independent Statistics and Analysis

Commercial Building
Energy Alliances

1. Within your building stock, where do you need the most support with respect to lighting?
2. What lighting technologies are you most interested in?
3. What are your current challenges with respect to daylighting?
4. What are your current challenges with respect to lighting controls?

Within your building stock, where do you need the most support with respect to lighting?

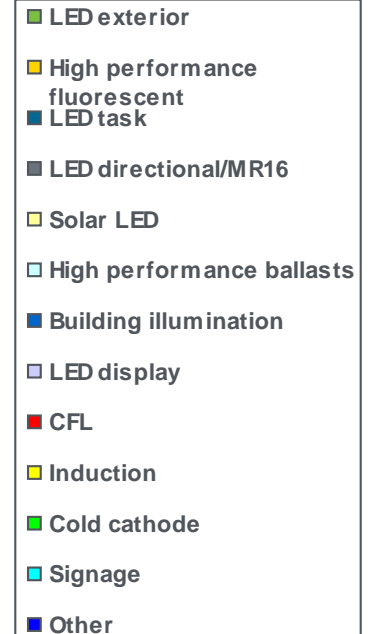
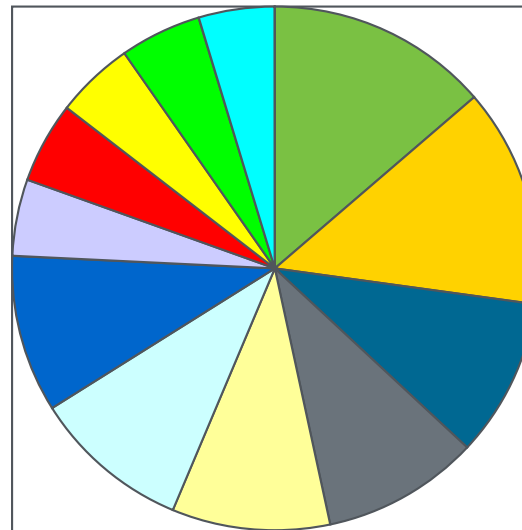
- 57% Office
- 14% Warehouse
- 14% Hospitality
- 14% Retail — Entertainment
- 0% Shopping Center
- 0% Other



CREEA Lighting Question #2

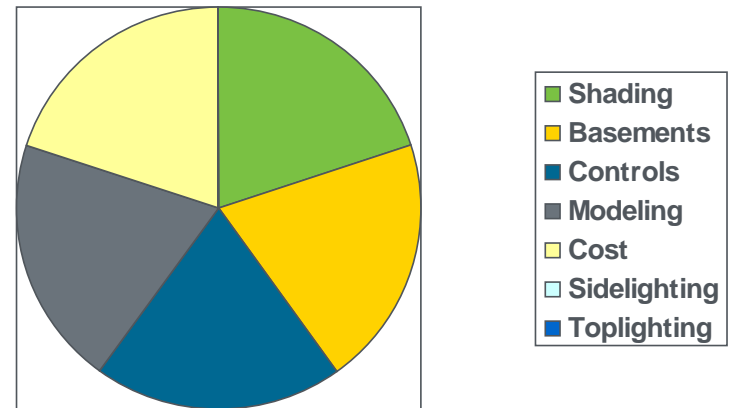
What lighting technologies are you most interested in?

- 14% LED exterior
- 14% High performance fluorescent
- 10% LED task lighting
- 10% LED directional MR16
- 10% Solar LED
- 10% High performance ballasts
- 10% Building illumination
- 5% LED display
- 5% CFL
- 5% Induction
- 5% Cold cathode
- 5% Signage
- 0% Other



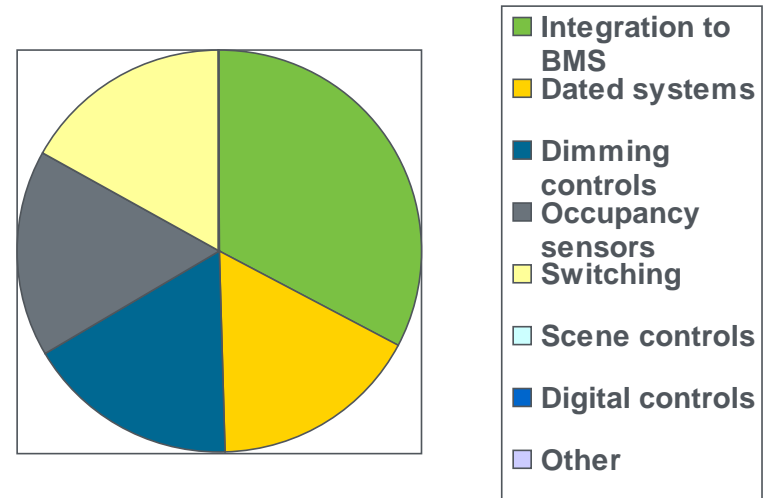
Where are your current challenges with respect to daylighting?

- 20% Shading
- 20% Basements
- 20% Controls
- 20% Modeling and analysis
- 20% Cost of retrofit
- 0% Side and top lighting



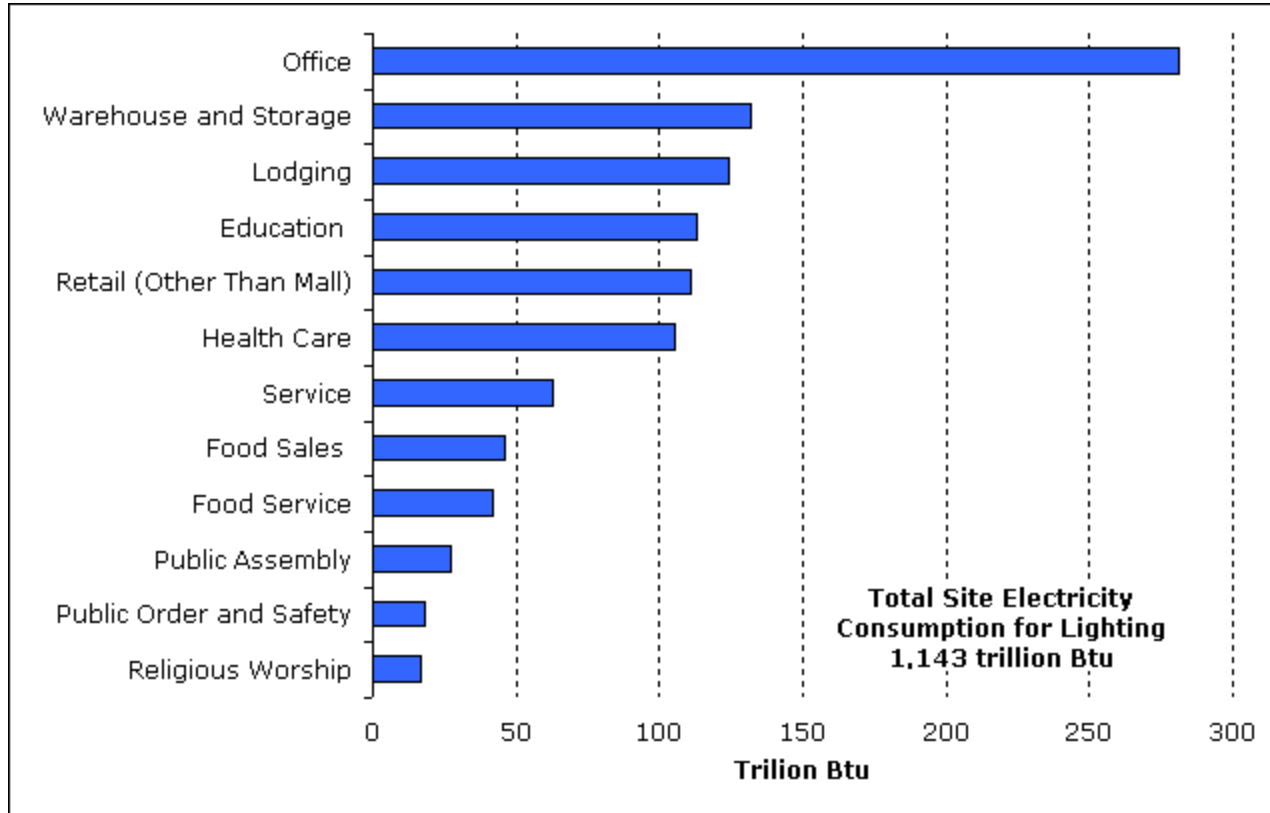
Where are your current challenges with respect to lighting controls?

- 33% Integration to BMS
- 17% Dated systems
- 17% Dimming controls
- 17% Occupancy sensors
- 17% Switching
- 0% Scene controls
- 0% Digital controls
- 0% Other

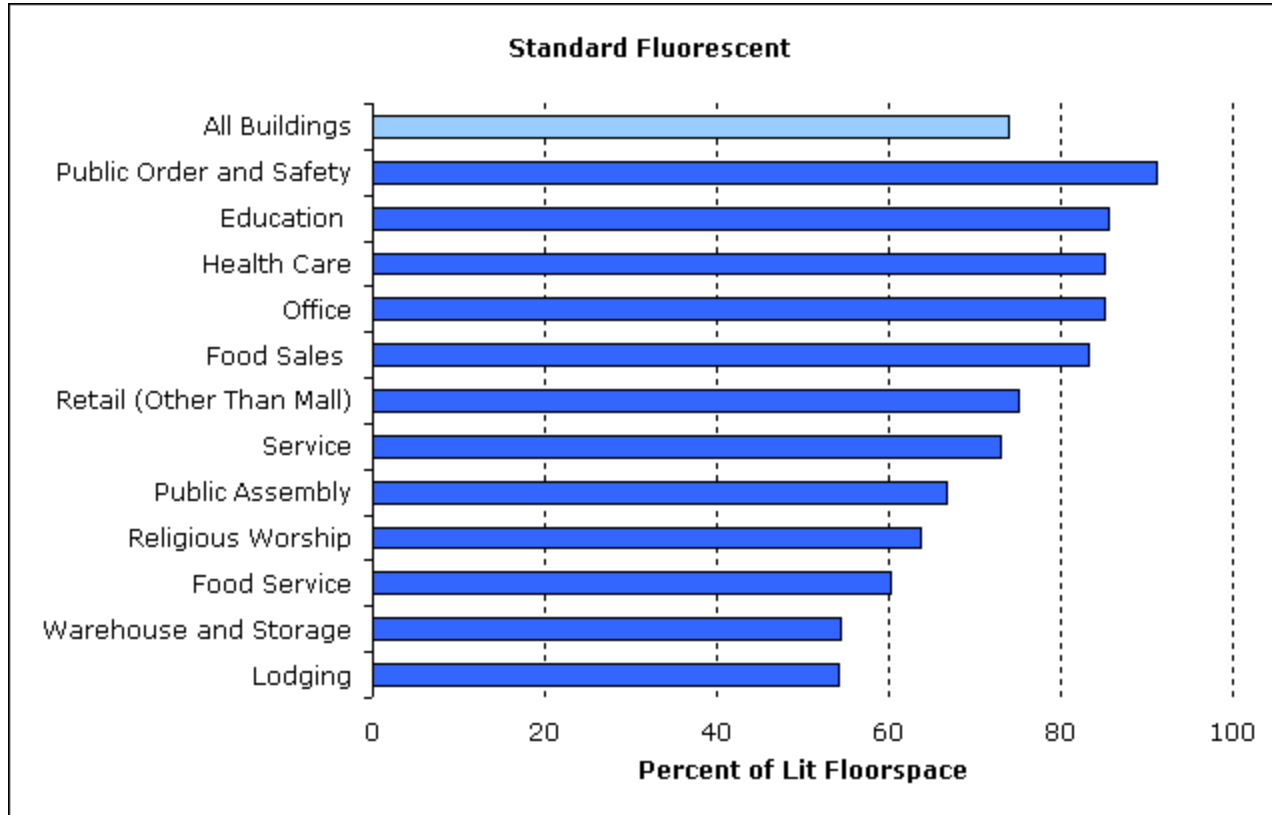


- Majority of support requested focused on office environments
- Technology interest in LED and high performance fluorescent lighting
- Challenges with respect to daylighting
- Challenges related to lighting controls

- Majority of support requested focused on office environments
- Office buildings consume more than twice as much site electricity for lighting as any building type



- Technology interest in LED and high performance fluorescent lighting
- Standard fluorescent lighting, by far, illuminates the greatest amount of floorspace in commercial buildings



- Provide real-time access to advanced technologies and analytical tools emerging from DOE and the national energy laboratories
- Create and share successful, evidence-based strategies for integrating advanced, high-performance technologies or processes in their facilities
- Serve as a consistent, compelling voice to national manufacturers and distributors in response to the demand for highly efficient products and services in the commercial real estate sector
- Provide greater consistency in energy-efficiency program design and delivery

- Help DOE shape the future of technology research and development by clarifying the business needs unique to the commercial real estate sector
- Validate the commercial real estate sector's energy- and carbon-reduction efforts to internal and external audiences, including prospective tenants and buyers and the financial community
- Significantly increase commercial real estate's energy efficiency, which will also reduce greenhouse gases
- Lower the cost of technologies and overcome regulatory barriers